

P.O. Box 51450 Idaho Falls, Idaho 83405 (208) 523-6600 Fax (208) 523-6021

DE/AFS/SF

Equal Opportunity Employer

April 20, 2007

RECEIVED

APR 2 3 2007

DEPARTMENT OF ENVIRONMENTAL QUALITY

Mr. Jonathan Pettit Air Quality Permitting Analyst State of Idaho Department of Environmental Quality 1410 North Hilton Boise, Idaho 83706

Re:

PTCs for Idaho Falls Plant and Teton Plant

Dear Mr. Pettit:

Attached please find the new copies of the Permits to Construct for the following Plants:

- 1. Idaho Falls Plant 019-00031
- 2. Teton Plant P-060523

After talking Bill Rogers on the phone on Thursday, April 19, 2007, I am sending the updated information to you for your review and submittal. Please consider this as my application for both plants. If you have any questions or concerns please call me and I will be glad to assist you.

Thank you for your patience and assistance with this matter.

Sincerely,

Clarence H Davis

acence,

Permits & Environmental Administrator

H K Contractors, Inc.

P.O. Box 51450

Idaho Falls, Idaho 83405

(208) 523-6600

Idaho Department of Environmental Quality
Air Quality Division
Stationary Source Program

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

Please be sure to read the instructions on page one prior to completing this application form.

GENERAL INFORMATION

RECEIVED

Company Name:	H K Contractors, Inc.				APR 2 3 2007
Mailing Address:	P.O. Box 51450				DEPARTMENT OF ENVIRONMENTAL QUALITY
City:	Idaho Falls		State:	Idaho	o STATE A Q PROSEAM
Zip Code:	83405		County:	Bonn	neville County
General Nature of Business & Products:	General Contractor -	Underground Utility, (Gravel & As	phalt &	Etc.
Contact Name, Title:	Larry Ritter / Asphalt	General Superintend	ent	V/V	
Phone:	208-523-6600		Cell:	208-	317-8627
Email:	larryritter@hkcontract	ors.com			
Owner or Responsible	Weds Fester / Owner		Clare	nnoo H	Davis / Permits
Official Name, Title:	Wade Foster / Owner		7.000000	523-66	owaw.
Phone:	208-523-6600				The state of the s
Email:	wadefoster@hkcontra	actors.com	Clare	enceda	vis@hkcontractors.com
Proposed Initial Plant Location:	1523 East 49 th North				
Nearest City:	Idaho Falls		Estimated		
County:	Bonneville		Startup D		4/1/2007
Reason for Application:	Permit to construct a Permit to operate an Permit to modify/rev Permit No.: Issue Date: Facility ID:	existing unpermitted s		entify the	e permit below)
Check here to indicate	ate you would like to revie	w a draft permit prior to	final issuan	ce.	
Comments:					
	I Type and Changing fro	000 5			

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

HOT-MIX	ASPHALT	PLANT I	<u>INFORM</u>	<u>NOITA</u>
---------	----------------	---------	---------------	--------------

Manufacturer:	Barber Green		Model:	DM-60					
Manufacture Date:	1968		Type HMA Plant:	□ Drum Mix □	Batch Mix				
Maximum Hourly Aspl	nalt Production:	400 (tons/hour)							
Requested Annual As	phalt Production:	3,504,000 (tons/	/year)						
Burner Fuel Type:	TO FEED OF E	Used Oil, Propan	ne, #2 Fuel Oil, Nat 0	Gas (natural gas, #2	fuel oil, etc)				
Maximum Burner Fuel	Usage Rate:	500 scf/hour	or 🛛 gallons/hour						
Type Air Pollution Cor	ntrol Device:	Scrubber (bagho	use, scrubber, etc.)						
Control Device Manufacturer:	Barber Green		Model:	CV-70					
Stack Parameters:	Stack Height from	m Ground (ft): 28 Diameter (ft): 8.0		xhaust Flow Rate (ac st Gas Temperature (
ASPHALT TANK HE	ATER	Natural gas	natural gas, #2 fuel oi	I. etc)					
Maximum Fuel Usage	Pate:		0,400 (units/year)		ther:				
Type Air Pollution Cor		none MMBtu		gameno <u>D</u> n <u>D</u> s					
Stack Parameters:	Stack Height fro			xhaust Flow Rate (ac	fm): ?				
	The second of th	Diameter (ft): 0.38		st Gas Temperature (
following: Were an af Stand []	if the HMA facility is a e any of the following fected facility as defined dards of Performance Dryers Systems for screening, Systems for loading, Systems for mixing he Leading, transfer, and fication is defined in	constructed or modifined in 40 Code of Fee for Hot-Mix Asphalt g, handling, storing, attransferring, and storiot-mix asphalt d storage systems as: 40 CFR 60.14. The Comments in the Comments	and weighing of hot ag	3, such that the equip t 60, Section 90 (40 o gregate n control systems	oment becom CFR 60.90)				
Has a performance teresisions are less that	an or equal to 0.04	in accordance with	40 CFR 60.93 that de Iry standard cubic fo	monstrates particul ot) at the HMA stack	ate matter				
MANAGE TO BE		2024uoted: 8/8/2000	ř.						
1991 - 1992/SALECKERSON (1997)		conducted: <u>8/8/2000</u>		DEO 1	datametele e				
froguency of p	y of the performance performance testing r	equirements for your	application if you want hot-mix asphalt plant.	DEG to consider it in	determining				

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

ELECTRICAL GENERATOR	SET INFORMATION	(IF APPLICABLE)
-----------------------------	-----------------	-----------------

Manufacturer:	N/A	Model: N/A
Maximum Rated Capa	A LUCKE A	N/A
Fuel Type:	Mary Collins	☐ Gasoline ☐ Diesel ☐ Natural Gas ☐ Propane
Maximum Fuel Usage	Rate:	N/A gal./hr. cfh
Maximum Daily Hrs. o	f Operations:	N/A (hours/day)
Maximum Annual Hrs.	of Operations:	N/A (hours/year)
Stack Parameters:		rom Ground (ft): N/A Stack Exhaust Flow Rate (acfm): N/A de Diameter (ft): N/A Stack Exhaust Gas Temperature (°F): N/A
Manufacturer:	N/A	Model: N/A
Maximum Rated Capa	city:	N/A Hp kW
Fuel Type:		☐ Gasoline ☐ Diesel ☐ Natural Gas ☐ Propane
Maximum Fuel Usage	Rate:	N/A gal./hr. cfh
Maximum Daily Hrs. of	Operations:	N/A (hours/day)
Maximum Annual Hrs.	of Operations:	N/A (hours/year)
Stack Parameters:		from Ground (ft): N/A Stack Exhaust Flow Rate (acfm): N/A stack Exhaust Gas Temperature (°F): N/A
⊠ \$1,000 PTC appli	cation fee encl	losed
I hereby certify that base	ed on information y attached and/or	and Completeness (by Responsible Official) and belief formed after reasonable inquiry, the statements and information referenced document(s) are true, accurate, and complete in accordance with Permits & Environmental Administrator 02/05/07
Responsible Official Signat Clarence H Davis Print or Type Responsible (Responsible Official Title Date

H-K Contractors, Inc. Idaho Falls Facility HMA Plant Potential to Emit and Air Quality Modeling Analysis Report

Prepared for:

H-K Contractors, Inc. P.O. Box 51450 Idaho Falls, ID 83405

Prepared by:



Environmental Consulting Services, LLP
451 Freedom Ave.
Billings, MT 59105
www.enviroconsult.com

April 5, 2007

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1.0 INTRODUCTION

Environmental Consulting Services, LLP (ECS) has been retained by H-K Contractors, Inc. (HKC) to provide assistance with, and to perform, specific air quality (AQ) calculations and modeling services in order to support HKC with modifications to their AQ Permit to include the use of two additional fuel types in the Dryer Drum of the Idaho Falls Facility Hot Mix Asphalt (HMA) Plant. ECS has performed, and presents herein, potential to emit (PTE) calculations and AQ Modeling of the proposed changes to the Idaho Falls Facility HMA Plant.

2.0 SITE INFORMATION

ECS has been provided with the address of the Idaho Falls Facility HMA Plant site by HKC, with the current location of the site as 1523 East 49th North, Idaho Falls, ID (see Figure 1). This HMA Plant was issued a Permit to Construct (PTC) from the Idaho Department of Environmental Quality (IDEQ) on June 28, 1999 (AQ Permit #019-00031) and lists the following AQ Permit Emission Limits:

Dryer Drum:

- o PM (Particulate Matter) emissions from the dryer stack shall not exceed 0.04 gr/dscf (grains per dry standard cubic foot) in accordance with 40 CFR 60.92
- 99.0 tons per year (T/yr) Carbon Monoxide (CO) emission limit on dryer stack outlet
- o 3,504,000 T/yr throughput limit for non-collocated facility
- 1,752,000 T/yr throughput limit for collocated facility
- 9,450 T/yr throughout limit for petroleum contaminated soil and aggregate mixture

This HMA Plant is a 1968 Barber Green, Drum Mix with a Wet Scrubber. The throughput rate of this HMA Plant is at the maximum of 400 T/hr (tons per hour), and currently uses propane and/or natural gas for fuel for the Dryer Drum.

3.0 PROPOSED CHANGES

It is the understanding of ECS that HKC wishes to propose that an additional two fuel types be able to be used and permitted for the Dryer Drum of The Idaho Falls Facility HMA Plant along with a change of burner and that these will be the sole proposed changes. The two additional fuel types proposed are: #2 Fuel Oil and Used Oil. ECS has therefore approached the PTE and AQ Modeling work tasks with these sole proposed changes in mind. As there will be no changes to the Tank Heater or other ancillary systems of the Idaho Falls Facility HMA Plant, then ECS sees no need to further quantify PTE or AQ Modeling for these features of this HMA Plant. PTE and AQ Modeling of the Idaho Falls Facility HMA Plant will be performed on the Dryer Drum only, and will consist of an assessment of any increase(s) of emissions of this HMA Plant due to the proposed additional fuel types to be used in the Dryer Drum.

Figure 1 - Site Location

Page 1



4.0 PTE CALCULATIONS

ECS has used the following Idaho Falls Facility HMA Plant Dryer Drum specific data for PTE calculations as well as AQ Modeling work tasks:

- Barber Green Drum Mix Dryer Drum
- 400 T/hr throughput maximum capacity
- ♦ Four fuel types (proposed) of Propane; Natural Gas; #2 Fuel Oil; and Used Oil
- Wet Scrubber emission control (rated at a minimum of 70% control efficiency)
- Stack Height of 28 ft (feet) or 8.53 m (meters)
- Stack Diameter of 8 ft or 2.44 m
- Exit gas volume of 45,000 acfm (actual cubic feet per minute) or 14.92 ft/s (feet per second) or
 4.55 m/s (meters per second)
- ♦ Exit gas temperature of 135 °F or 57.22 °C or 330.37 °K

For PTE calculations ECS will use AP-42 emission factors (Efs) and since there are four types of fuel proposed to be used for the Dryer Drum, then ECS will use the most restrictive (i.e., worst-case scenario) Ef for any/all listed parameters in AP-42 Section 11.1 Hot Mix Asphalt Plants, revised March 2004. For clarity ECS has calculated PTE for both criteria pollutants and toxic air pollutants (TAPs).

Criteria Pollutants PTE:

Criteria pollutants were calculated in three distinct manners, with copies of the spreadsheets included in Appendix A, as well as a comparison of data values spreadsheet. The four criteria pollutant PTE spreadsheets are:

- Maximum PTE
- ♦ Actual Proposed PTE
- Permit Limits PTE
- PTE Data Values Difference of Actual Proposed Compared to Current Permit Limits

The Maximum PTE calculations are for IDEQ to use to classify the Idaho Falls Facility HMA Plant, which according to IDEQ regulations appears to be classified as a "synthetic minor" (SM) source. The Actual Proposed PTE calculations present results for emissions of criteria pollutants according to the proposed changes of adding two fuel types for the Dryer Drum. The Permit Limits PTE calculations present results for emissions of criteria pollutants according to current permit limits for the Dryer Drum. The difference of the calculated emissions of the Actual Proposed PTE and the Permit Limits PTE is shown on the PTE Data Values Difference. The PTE Data Values Difference indicates one (1) criteria pollutant that will increase, with SO₂ emissions increasing a calculated 9.3 TPY.

As the calculated emission increase is well below the 40 TPY "significant" emission levels in IDAPA 58.01.01 then there does not appear to be any reason for any further study of the SO₂ criteria pollutant.

Toxic Air Pollutants PTE:

Toxic Air Pollutants (TAPs) were calculated in three distinct manners, with copies of the spreadsheets included in Appendix A, as well as a comparison of data values spreadsheet. The TAPs PTE spreadsheets are:

- Maximum PTE
- Actual Proposed PTE
- ♦ Permit Limits PTE
- ♦ PTE Data Values Difference of Actual Proposed Compared to Current Permit Limits

Again, the Maximum PTE calculations are for IDEQ to use to classify the Idaho Falls Facility HMA Plant. The Actual Proposed PTE calculations present results for emissions of TAPs according to the proposed changes of adding two fuel types for the Dryer Drum. The Permit Limits PTE calculations present results for emissions of TAPs according to current permit limits for the Dryer Drum. The difference of the calculated emissions of the Actual Proposed PTE and the Permit Limits PTE is shown on the PTE Data Values Difference. The PTE Data Values Difference indicates that there will be no TAPs increases in emissions that will exceed the screening emission level (EL) set by IDEQ in IDAPA 58.01.01 Sections 585 and 586. Due to this result then no further actions, including AQ Modeling, should be required.

5.0 AQ MODELING

As no "significant" emission levels for criteria pollutants were reached or exceeded, as well as no ELs of TAPs reached or exceeded, then there does not appear to be any reason or requirement to perform AQ Modeling for the proposed changes of adding the two types of fuel for the Dryer Drum at this facility. Should AQ Modeling be deemed to be necessary/required for any air quality pollutant of the Idaho Falls Facility HMA Plant Dryer Drum, due to the proposed fuel type changes, then ECS would use the EPA approved SCREEN3 model with the specific stack data for the Idaho Falls Facility HMA Plant Dryer Drum, as shown above, and would typically use the rate of one (1) pound per hour (lb/hr) emission rate, which is 0.126 g/s (grams per second), to generate a dispersion coefficient for the Dryer Drum stack. ECS did perform this function (i.e., AQ Modeling) and this dispersion coefficient, which is shown to be $16.62 \mu \text{g/m}^3$ (micrograms per cubic meter) per 1 lb/hr of any pollutant emitted from the Dryer Drum stack, can then be used as needed/required to calculate the highest estimated concentration of any pollutant for the Idaho Falls Facility HMA Plant Dryer Drum and the proposed changes of adding the two fuel types to the Dryer Drum.

Since there is a linear relationship between emission rate(s) and ambient air quality impact(s), then this relationship can be used to predict the actual ambient air quality impact by multiplying the dispersion coefficient of the Dryer Drum stack (i.e., $16.62 \,\mu\text{g/m}^3$) by the actual emission rates of any air quality pollutants emitted from the Idaho Falls Facility HMA Plant Dryer Drum.

6.0 DISSCUSSION OF RESULTS

According to the PTE calculations and the AQ Modeling performed on the Idaho Falls Facility HMA Plant, as described within this Report, ECS has concluded that all Criteria Pollutants and the listed TAPs do not exceed any IDEQ ELs and/or trigger any additional modeling and/or assessments.

7.0 LIMITATIONS AND RESTRICTIONS

ECS has prepared this PTE and AQ Modeling Analysis Report specifically for this project, this site, and for HKC and the IDEQ. This document is solely for the use of ECS, HKC, and IDEQ any reliance on this document by a third party without the written consent of both ECS and HKC is prohibited. Should any information contained in this document, or any part of this document, be used by a third party, this shall be at the third party's sole risk.

ENVIRONMENTAL CONSULTING SERVICES, LLP

Kevin K. Walsh

Partner/Consultant

Ken K. Wall

H-K	Cont	raci	ors.	Inc.

Idaho Falls Facility HMA Plant PTE and AQ Modeling Analysis Report

APPENDIX A

POTENTIAL TO EMIT CALCULATIONS

H-K CONTRACTORS, INC.
IDAHO FALLS FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - MAXIMHM - POTENTIAL TO EMIT (based on 8.760 hours per year)
UNCONTROLED EMISSIONS
Based on maximum production rate of 400 tons per hour and four fuel types (Used Oil, #2 Fuel Oil, Propane; & Natural Gas)

Earl Dear Manage State (MCC)	PM EF Value	PM	PM-10 EF Value	PM-10	CO EF Value	co	NOx EF Value	NOx	SO2 EF Value	502	EF Value	VOC	I ead EF Value	Lead
Point Source	(lb/ton)	CTPYI	(lb/ten)	(TPY)	(Hs/ton)	CIPYS	(th ton)	(TPY)	(lb/ton)	(TPY)	(lb/ton)	(TPY)	(lb ton)	(TPY)
HMA Plant	28.0	49056.0	6.5	11388.0	0.13	227.8	0.055	96.4	0.058	101.6	0.032	56.1	0,00054	0.9

Area Sources	PM EF Value (lb/ton)	PM (TPY)	PM-10 EF Value (Ib/ton)	PM-10 (TPY)		CO (TPV)	NOx EF Value (lb/ton)	NOx (TPV)	SO2 (TPY)	VOC EF Value (lb/ton)	VOC	Lead EF Value (lb/ton)	Lead (TPY)
Silo Filling	0.0021	3.7	0.00105	1.8	0.0081	14.2		0.0	0.0	1	0.0	1	0.0
Loadout	0.0025	4.4	0.00125	2.2	0.0092	16:1	-	0.0	0.0		0.0		0.0

Note: EF values are from AP-42 and are as "uncontrolled" emissions

Total Particulate Matter (PM) and Total PM-10 EFs from Table 11.1-5

CO, NOs, SO2 EFs from Table 11.1-7

VOC EF from Table 11.1-5

Area Sources EFs from Table 11.1-14 (PM-10 enimated at 50% of PM)

II-K CONTRACTORS, INC.
IDAHO FALLS FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - ACTUAL PROPOSED - POTENTIAL TO EMIT (based on 4,380 hours per year)
CONTROLLED EMISSIONS (Wet Scrubber)
Based on maximum production rate of 400 tons per hour and four fuel types (Used Oil; #2 Fuel Oil; Propane; & Natural Gas)

	PM FF Value	PM	PM-10 EF Value	PM-10	CO El Value	co	NOx EF Value	NOs	SO2 Ef Value	SO2	VOC III Value	voc	Lead EF Value	Lead
Point Source	(lb/ton)	(TPY)	(thron)	(TPY)	(lluton)	(TPY)	(lb-ton)	(TPY)	((brten)	(TPY)	(fb/ton)	(TPY)	(lb/ton)	(TPY)
HMA Plant	0.045	19.4	0.0042	3.7	0.13	34.2	0.055	14.5	0.058	15.2	0.032	8.4	0.00054	0.1

Area Sources	PM EF Value (ib/ton)	PM (TPY)	PM-10 EF Value (th/ton)	PM-10 (TPV)	CO EF Value (lb/ton)	CO (TPY)	NOs EF Value (lb/ton)	NOA (TPV)	SO2 EF Value (lb/ton)	SO2 (TPY)	VOC EF Value (lis/ton)	VOC (TPY)	EF Value (B/ton)	Lead (TPY)
Silo Filling	0.0029	1.3	0.0014	0.6	0.0081	3.5	1 2 2 2 2 2 2 2	0.0	100000	0.0	The state of	0.0	100000	0.0
ordout	0.0084	3.7	0.004	1.8	0.0092	4.0		0.0		0.0		0.0		0.0

Note: EF values are from AP-42 and are as "controlled" emissions

Total Particulate Matter (PM) and Total PM-10 EFs from Tables 11.1-3 and 11.1-4 (fabric filter control)

CO, NOs, SO2 EFs from Table 11.1-3 and using a 70% control efficiency (CB) for the Wet Sembber

VOC EFs from Table 11.1-3 and using a 70% CE for the Wet Sembber

Area Sources EFs from Table 11.1-14 using a 50% CE for water sprays

H-K CONTRACTORS, INC.
IDAHO FALLS FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - PERMIT LIMITS - POTENTIAL, TO EMIT (based on 8,760 hours per year when not collocated)
CONTROLLED EMISSIONS (Wet Serubber)
Hased on maximum production rate of 400 tons per hour and currently permitted fuel type of Propane or Natural Gas

oint Source	PM EF Value (Ib/ton)	PM (TPY)	PM-10 EF Value (llyton)	PM-10 (TPY)	CO EF Value (fluton)	CO	NOX EF Value (lb/ton)	NOx (TPY)	SO2 EF Value (fb/ton)	SO2 (TPV)	EF Value (lb/ton)	VQC (TPY)	EF Value (Ib/ton)	Lead (TPY)
IMA Flant	0.015	78.8	0.0042	7.4	0.13	127.8	0.026	45.6	0.0034	6.0	0.032	56.1	0.00054	0.9

Area Sources	PM EF Value (fb/ton)	PM (TPY)	FM-10 EF Value (lb/ton)	PM-10 (TPY)	CO EF Value (Ib ton)	CO (TPY)	NOs EF Value (lb/ton)	NOX (TPV)	SO2 EF Value (Ib/ton)	502 (1PY)	EF Value (th/ton)	VOC (IPV)	Lead EF Value (Briton)	Lead (TPY)
Silo Filling	0.0029	5.1	0.0014	2.5	0.0081	14.2		0.0		0.0		0.0		0.0
Loadout	0.0084	14.7	0.004	7,0	0.0092	16.1		0.0		0.0		0.0		0.0

Note: EF values are from AP-42 and are as "controlled" emistions

Total Particulate Matter (PM) and Total PM-10 EFs from Tables 11.1-3 and 11.1-4 (tabric filter control)

CO, NOL, SO2 EFs from Table 11.1-3 and using a 50% control efficiency (CE) for the Wet Serubber

VOC EF from Table 11.1-3 and using a 50% CE for the Wet Serubber

Area Sources EFs from Table 11.1-14 using a 50% CE for water sprays

II-K CONTRACTORS, INC.
IDAHO PALES PACILITY HOT MIN ASPHALT (HMA) PLANT
PTE DATA VALUES DIFFERENCE OF ACTUAL PROPOSED COMPARED TO CURRENT PERMIT LIMITS
For use in Emission Limit (EL) comparison for IDEQ and EPA Criteria Pollutants

Point Source	PM (TPY)	PM-10 (TPY)	CO (TPY)	(TPY)	SO2 (DPY)	VOC	Lead (TPV)
HMA Plant	-19.4	-3.7	-1916	-31.1	9.3	+47.7	+0.8

Area Sources	PM (TPV)	PM-10 (TPY)	CO (TPY)	NOx (TPY)	SO2 (TPV)	VOC (TPY)	Lead (TPY)
Silo Filling	+3.8	-18	-10.6	0.0	0.0	0.0	0.0
Loadout	-11.0	-5.3	-12.1	0.0	0.0	0.0	0.0

HAN CONTRACTORS, INC.

IDAHO FALLS FACILITY HOT MIN ASPHALT (IIMA) PLANT

EMISSION CAL CLLATIONS: MAXIMUM - FOTENTIAL TO EMIT (based on 8,760 hours per 3 (ar)

Based on maximum production rate of 600 tons per hour and four ford types (Ured (bit) #2 Fool Oit; Peupone; & Natural Gos)
AIR TOAKES AND HAZARDOKS AIR POLATANTS (HAPs)

Point Source = HMA Plant; Parallel Drum Mix Deyer

Pallistant		Calculated TPY	Pellutant	EF Value	Calculated TPV			
1501	0.60021	0.26792	Metals					
			Antunous	freececous.	0.00031536			
Von P.101114Ps			Afrenie	0.0060013	0.0022776			
Acetaldebaste	0.6013	2.2776	Barnett	3 00025				
Acrolein	0.000026	0.045552	Cadrinaria	0.9000042	0.0023544			
Benzere	0.00039	0.68328	Chaomium	0.000024	0.042048			
shothestrate	0.00024	0.42048	Cotah	0.000015	0.02629			
Permuldelaste	0.031	5 4312	Copper	0.09017	0.20744			
I fe varie	O (#3942	1.61184	The saylest Cheminara	0.600,00045	0.0007884			
Security (2.2.4-inmens)	interest.	0.62000	Lod	0.00054	0.94008			
Methyl Upol Ketone	(3.143.612	0.03564	Mangarese	0.00665	1.1255			
Programal defrade	0.00012	0.22776	Mercury	0.0000026				
Quirente	0.00016	0.28052	Nickel	6.0013				
Method chiloroform	Hidenia.	0.084096	Photphonas	0.0012	2.1024			
I observe	610029	ATORCAL	Street	11.000000045				
Niche	0.0002	11 1501	Schoiam	0.0000024				
Testal New PARELLEY	0.0994	16.644	Dallam	0.0000022				
1000-1000-1000-1		100010	Zas	0.0016		Video a	EF Value	Calculated
V-1010111						Pollutant	(lb/ion)	TPY
PARTIES.	C-2-2		Discher		100000000000000000000000000000000000000	Lincoln	(Carrier () Carrier ()	(10) a 200 -
-Methylesetthalene	0.00017	0.29784	2.3,7,8-TCDD	2.18-32		2,3,7,6,1010	9.21(43	
Acenaphthese	0.0000014	0.0024528	Tetal TCDD	9.38-13	1+29%55-09	Fotal TCDP	3.315-13	5.78161-08
Acquaphtis igne	0.000022	6.038544	1.2.3.2.849(100	3.11(-13	5.43125-10	1,2,2,7,8-PoCTP.	4.38/12	7,53361-09
Anthracene	# (core)	0.0054312	Total Pat 1913	2.28541	3 45445,04	2,3,4,7,8-158719	4.410-13	
Henzolakinthra, ene	0.000000021	0.0(6/36792)	1.2.3.4.7.6.1(sc:Di)	4.215-13	7.35845-10	Total Pac'l F	8.41(-1.1	1.47168E-02
Denodatorene	9.85.09	1.71698[1-05	L23.6.78-HCDD	1,3091-12	2.277601(0)	1,22,4,7,8 HM/DE	3.415.12	9.40000.69
Hertzoet Winnendtherse	0.0000001	0.0001752	1.2.3.2.8.9416CDD	9 805-13		1.2.2.6,7.8-10.000	1.25-12	2.10246409
then/ofetranene	0.000000011	0.00019272	TOTAL HACTOD	1.200-11	2.1024E-04	2,5,4,6,7,8-Hat 'Di-	1.9(412	3.32001409
fenogelupeo late	0.000000004	0.60000004	1.2.3,4.6,7.8-HaCDD	3 400-11		1,2,3,7,8,9-HACDE	6.40-12	1,471681-08
Senzo G. Hisporantisene	0.000000041	0.000071832	Total MgCDD2	7 100 111	1.243021-07	Total Het DF	1.385-11	2.2776E408
Toty or tic	010000015	0.00031526	OctaCDD	2.700 470	4 T/041:05	1,2,2,4,6,7,8 HoCDF	1.11(-11	1.9272E-08
Flairanthene	1500000000	0.00106472	Tetal PCDD	2-800)-290	4 90501-06	1.2.3.4,2.8,9.1(sCDF)	2.76-12	4.73041.49
(Talifone	(1000001)	0.019272		-	The state of the s	Total HpCDE	3.88611	6.62264560
Indetect 1.2.3 volumence	DESCRIPTION?		Carroll Lawrence Control	1		OctaCDE	4.86-12	X 409641 478
Nighihalene	0.00065	1.1388				Total PCDE	1.555-10	2.6281-62
Perylana	3 51 470	1.541761505				Total PCDD PCDF	3.015479	D10000035256
Physianthrope	0.606023	0.040296						
15 Years	0.600003	0.005256						
Total PARLITAPS	0.0000	1.54176						
Intal HAPs	0.01	17.52						

NOTE: PE values are from AP-42 and are as a combination of 'controlled' emosions as "falses filter" and 'uncontrolled'. Due to four types of her the "worstware" IP was relevand and used.

Tables 11-13, 31-11-0, 3211-322.

H-K CONTRACTORS, INC.
IDAHO PALLS PACILITY HOT MIN ASPHALT (HMAJ PLANT
EMISSION CALCULATIONS - ACTUAL PROPOSED - POTENTIAL TO EMIT (based on 4.380 hours per year)
Based on maximum production rate of 400 tens per hour and four fact types (beed Od; #2 Fuel Od; Pregnar; & Natural Gas)
AIR TONICS AND HAZARDOUS AIR POLLUTANTS (HAPS)
Point Source = HMA Plant; Parallel Drum Mix Bryer

Pollatant	EF Value (th/ton)	Calculated TPY	Pollutant	EF Value (Ha/ton)	Calculated			
HUI	0.00021	0.18396	Metuls	State Committee	23. Vice			
Witness of the second			Antimony	0.00000018	0.00015768			
Non-PARTITAT's	- Contract		Arsenie	0.00000056	0.00049056			
Acetaldehyde	0.0013	1.1388	Batium	0.0000058	0.0050808			
Arrolein	0.000026	0.022776	Cadmian	0.00000041	0.00035916			
Benzene	0.00019	0.34164	Chrysniana	0.0000055	0.004818			
Fibrilbenzene	0.00024	0 21024	Cobalt	0.000000026	0.000022776			
l'ormaldchyde	0.0031	2.7156	Copper	0.0000031	0.0027156			
liexane	0.00092	0.80592	Hexaylent Chromism	0.00000045	0.0003942			
Doogtage(2,2,4-trimefly)pentage)	0.00004	0.03504	Lead	0.00000062	0.00054312			
Methyl Pilod Ketone	0.00002	0.01752	Manganese	0.0090077	0.0067452			
Propionaldehyde	0.00013	0.11358	Mercury	0.00000024	0.00021024			
Quinone	0.00016	0.14016	Nickel	0.000061	0.045188			
Methyl chloroform	0.000041	0.042048	Prospherus	0.000028	0.024528			
Toluene	0.0029	2 5404	Silver	0.00000048	0.00042048			
Xylene	0.0002	0.1752	Selenium	0.00000033				
Total Non-PAILITAPs	0.0095	8.322	Thallaim	4 1E-09	1.5916F-06			
V-0.000.000.000.00			Zing	0.000061	0.053436	Pollutant	EF Value	Calculated TPV
CARLUATE			Decres	And a consequent	14.771577	Furans	The state of the s	
2-Methylmaphahalene	0.00017	0.14892	2.1.7.8-TCDD	2.1E-13	1 8196E-10	2,3,7,8-TCDF	9.70-13	8.4972E-10
Acenaphilicine	0.0000014	0.0012264	Total TCDD	9.3E-13		Total TCDP	3 3E-11	2 8908E-08
Ac enaphthy lene	0.000023	6.019272	1.2.3.7.8-PeCDD	3.1E-12		1,2,3,7,8-PcCDF	4 3E-12	3 7668E-09
Ambracene	0.0000031	0.0027156	Total PeCDD	2.2E-11	1 9272E-08	2.3.4.7.8 PeCDF	8.48-13	7.3584E-10
Dence(a)anthracene	0.00000021	0.00018396	1.2.3.4.7.8-H-CDD	4 2E-13		Total PcCDF	8 4E-11	7.3584E-08
Benzo(a)pyrene	9.88-09	8 5848 2-06	1.2.3.6.7.8-HACDD	1.30E-12		1.2.3.4.7.8-HxCDF	5.4E-12	4.73040.09
Benzoch fluroanthene	0.0000001	0.0000876	1,2,3,7,8,9 HcCDD	9 80E-13	3 5545E-10	1.2.3.6.7.8 H&CDF	1.28-12	1.0512E-09
Henzo e parene	0.03000011	0.00009636	Total HyCDD	1.20E-11	1.0512E-08	2.3.4.6.7.8-HxCDF	1.98-12	1.664411-09
Benzo(g.h.i)pen tene	0.00000004	0.00003594	1.2.3.4.6.7.8-HpCDD	3.4015-11	2.9784E+08	1.2.3.7.8.9-Hs-CDF	8.415-12	7.358411-09
Henzo kiffuoranthene	0.000000041	0.000035916	Total HpCDD	7.10E-11	6.2196E-08	Total HsCDF	1.38-11	1.1388F-08
Chrysene	0.00000018	0.00015768	Octa CDD	2.70E-09	2 3652E-06	1.2.3.4.6.7.8-HpCDF	1.18-11	9.636E-69
Paoranthene	0.00000001	0.00053436	Total PCDD	2 8015-09		1,2,3,4,7,8,9-HpCDF	2.7E-12	2.3652109
Fluorene	0.000011	0.009536			-	Total HpCDF	3.8E-11	3.3285E+08
indense(1,2,3-cd)pyrene	0.000000007	0.000006132				Octa C'DF	4.8E-12	4:20481:-69
Naphthalene	0.00065	0.5594				Total PCDF	1.5F-10	
Penleue	8 8F-09					Total PCDD-PCDF	3 GE-09	0.000002628
Phenanthrene	0.000023					The state of the s		-
Pyrene	0.000003	0.002628						
Total PARTETE	0.00083	0.77088						
Total HAP	0.01	8.76		_			1	

NOTE: EF values are from AP-12 and are as a combination of "controlled" emissions as "fabric filter" and "uncontrolled" Due to four types of feet the "worst-case" EF was referred and used.

Tables 11.1-5, 11.1-10, A11.1-12

HAN CONTRACTORS, INC.

IDAHO FALLS FACILITY HOT MIX ASPHALT (IDAA) PLANT

FAUSSION CALCULATIONS - PERMIT LIMITS - POTENTIAL TO EMIT (based on 8,780 hours per) for when not collocated)

Bard an maximum production rate of 400 tens per hour and currently permitted by it type of Propose or Natural Gas
AIR TONICS AND HAZAROUS AIR POLUTANTS (HAPs)

Point Source - HMA Plant; Parallel Drum Mix Dry er

	EF Value	Calculated		EF Value	Calculated			
Cellutant	(lb/ton)	TPY	Pellutant	(ib/ten)	TPV			
14.21	ND	#VALUE!	Metals	110				
			Autoropy	C. 4Y DECIDENTES	0.00031536			
Non-P311.11.05			Absente	O DECIDENTES	0.60098.112			
Acetaldehyste	ND	#VALUE:	Datiant	0.000034	0.0101616			
Acrolem	ND		Cadmium	0.000000043	0.06071932			
Lencene	0.60639	0.68328	Christmann.	0.0000055	(10) 9636			
Thydrenene	0.00024	0.42048	Cobalt	Direction 2a	-0:1660145552			
'ermaldeto de	0.0031	5.4312	Coldes	necessia	0.6054312			
Hexane	0.60092	1.61184	Hexas lent Chromeun	0.00000045	0.0077564			
soccome(2,2,4-trimethy)pentane)	6.00004	0.07108	Iral	#100000062	((10))(66524)			
Methyl I thyl Retone	ND	#VALUE:	Margarener	1100000077	0.013494			
Propional de ligide	ND.	#YALUE	Mercury	#0x00x024	1119/042048			
Zumone	ND.	#YALLE/	Nickel	CHENNED III	01110376			
Methyl chloroform	0.000048	1111141196	Plateplante.	0.000024	0.049046			
Volume	0.00015	0.262x	Silver	dicentralia.	0.000084096			
Sylene	(FERRO2	D 2504	Scleman	horomos	0.0006132			
Total Non-Pall HAPs	0.0051	N 9362	Dallum	4.16-69	7 18328-66			
			Zmg	Taccocut 0	0.106472		EF Value	Calculated
Williams				-		Pollutant	(Ib/ten)	TPY
P.O. HAPs	2000	0.000000	Decrees			Entere	Time to the	1111
2-Methylangt-thaleng	11ANNW/74	0.129618	2.3,7,4-737313	ND	WALLE	2.2.7.8-TCDF	N/J	FVALUE
Accomplishing	necest4	0.0024428	Total TCDD	ND	AVALUE	Total TCDF	SII	
Accordate for force	DESCRIPTION	0.0150672	1.2.5,7,8-Pel (10)	NO	#VALUE!	1.2.2.7.4-PeCDF	NO.	
Anthrasers	OCCUPATION 22	D-000034544	Total PeciDiD	ND	#VALUE	2.3.4,7,4.PyCDF	Ni	
ldti-o)(altiillraceng	6 00x000021	0.000036593	1.2.3.4.7.8-HsCDD	ND	#VALCE:	Tetal PyCDF	NO.	
Penantalparene	9.41.417	1.716/805/64	1,2,2,6,7,8-118(21)()	NO.	#VALUE!	1,2,2,4,7,4-H5CDF	SU	
lenzo(h)fluzoambene	0.0000001	G 10(4) 1752	1,2,3,7,8,9-1(sCDD)	ND	FVALUE	1,2,3,6,7,8,445,035	ND	
teno (e)py tene	0.000000011	0.00019272	Total Hacipin	ND	#VALUE!	2.3,4,6,7,4-10,000	NII	
henzotg.h.Operstene	6.000000004	D COOK TO A	1,2,3,4,6,7,8 HgCDD	N13	#VALUE	1,2,3,2,4,9-1(4,7)	510	
Extraotk)fluoranthy ny	0.0000000041	0.000071832	Total Hys (100)	ND	AVALUE	Total HsCDF	ND ND	
brysene	o recoderts	0.000033536	ONGCOD	ND	#VALUE	1,2,3,4,6,7,8-HpCT#	S11	
for marching.	0.000000641	0.00108872	DealPCDD	ND	#VALUE:	1,2,3,4,7,8,9-1(pC.D)	NI SII	
in fets	0.0000038	0.0066576	100000000000000000000000000000000000000	170		Total HeClair	1 80	
tideto(1,2,2-ed)pyrene	DIEREKEN?	0.000012264				Octa CDI	NO.	
Siphthalene	D OCKTON	0.15764				LOSS PUTE	NU	
Perview	\$ 8E-09	1 541761005				Total IV DISPCTOR	NI)	
Tienarahrene	0.0000076	0.0133152				Transfer Children	511	-value
Tyrene.	0.00000044	0.0094664					_	
Tutal PART HAD	(1076)19	0.33246		7			-	

NOTE, LD values are from AF-42 and are as a conductation of "controlled" emissions as "fifter filter" and "accontrolled" Filter 11 bs. 11.1-10, &11.1-12. NOTE, NOTE on this and #VALUE — to calculation.

H-K CONTRACTORS, INC.

IDAID FALLS FACILITY HOT MIN ASPIRALT (IMA) PLANT
PTE BATA VALUES DIPERENCE OF ACTUAL PROPOSED CONPARED TO CURRENT PERMIT LIMITS
For the in Finitions Limit (EL) comparison for IDAQ fisted Tasks Air Pollutants (TAP₂)
AIR TONICS AND HAZARBOOK AIR POLLUTANTS (HAP₃)

Paint Source = HMA Plant; Parallel Drum Mix Deyer

Pollutent	IDEQ EL (lb/hr)	Difference	Eurord EL(V/N)	Pollytent	EL (th/hr)	Difference th/he	Exceed EL(V/N)				
ICT .	1	PVALUE		Metals	Par Comment	1	1000	-			
			-	Antinens	000	0.0002	_	-			
Son PHILIPP	1000			Attenta	1.53540		_	-			
Vertaldehyde	1 00000	#WALLEY.	-	Harrian	0.611	-0.0051		-			
Acrobiti	171.02			Caterium.	1.70-66	3.59-04	_	4			
fengene	3 (01 ,04			Clesonian	960	-0150346		-			
thythename	2911			Cohalt	0.0011	20 (000)2	_	-			
prmal/khyte	1.11.04			Cappyy	0.011	-0.007		4			
levane	12 0			Hexadest Chromium	1.65-07	-0.0003945	_	-			
exectanus 2, 2,4 strengt by Frendanc's	1.0	40.0350		Lest	3,000007	de0054312		4			
Slethyl I that Ketone	193	45°AL 1.10		Manganese	fair o	-0.0067	_	4			
Propartically basis	2 878 412	WALLEY		Manager	0.013	-9.0002		-			
Sitrone	2.78-02	evalur:	-	Nickel	2.76.44	-5 A26-02		4			
Methyl elderoform	127.0	-0.0420		Physhopus	0.063	d1024524					
Minera	25 ()	2.2226	-	Siber	0.0.7	-0 co042046		-			
Nature	290	-0.1752		Selection	9,507	10000		-			
Frank Non-PMH JESPs	100	-0.6112		Dellore	0.007	0.0000	_				
		-		/inc	0.667	-0.0334			IDEO	Difference	Excent
				TOTAL STREET	17.1202	100000000		Poliutant	EL (Brist)	Difference	EL(Y/N)
MURA				Diakter				Farmer		1771000	The Reserved on
Methylmoghthalicus		0.0193		2,3,7,6-10300		#VALUE!		2.3.3.8-17/100		WALLED	
Acetospleheme		-0.0012		Total TCDD		PVALUE		Total TCD9		#VALUE	
Acetaplata tene		0.0042		1.2.3.7,8-Pactics		PVALUE		1,2,2,7,4-PVCDF		#VALUE	
Authracene		0.0023		Total Partition		#VALUE:		2,1,4,7,4-PoCDF		#VALUE!	
Names (a) and horsecond		40.0002		1.2.3.4,2,64(803)()		#VALUE		Total Petting		WVALUE	
Is now (A) years were	2.00 (0.0	- x8 581G06		1.2,3,6,2,6415(*00)		#VALUE!		1.2 3.8 Total Incide		#VALUE	
house(h)thereathere		-0.0001		1,2,3,7,8,9-H-CDD		PVALUE		1.2.3.6.7.8d before		WVALLED	
Same of the name		-0.0001		Total HeCDO		PVALUE		2.3.4.6.7.8.HeCDF		#VALUE	
tensis(e.h.i)perylene		0.0000		1.2.3.4.6.7.3-HpcDO		PVALUE		1,2,3,7,4,9-HACDF		WVALLE?	
School(k)(Lavennthana		0.0400		Total UpCDD		#VALUE		Total Hel'Dif	1	TVALUE	
Thrywine		40.0903	-	LScta (TDD)		#VALUE		1,2,3,4,6,7,8416/CT0F		#VALUE!	
Instantises		30,0005		Total PCT)D		AVALUE		1,2,3,4,7,8,9-11/CTDF		#YALLD!	
Learne		0.0030						Tetal Her Dil		WALLET	
rskou(1,2.3-solpyrene		0.0000						Octo CDF		WYALLES	
Saplithations	3.31	0.4117						Detail PCT#		#VALLE?	
Verylene		0.6000						Tesal Parameter DE		#VALUE:	
benanthrone		breed									
'a Talter		-40.00064									
Total PARI HAPS		0.4140									
Total RAPS		41 3350									

NOTE: IMQ EL values taken from ITAPA 51.01 to Tables in Sections 555 and 556 and represent the "Screening Emission Level" NOTE: #SCALITE industries no exhalation and thorofore an difference

Idaho Falls	Facility HM	Plant PTE and	AO Modeling	Analysis Report
idano rans	racinty ruvie	riant Fig and	AO MOUGHING	Analysis Report

H-K Contractors, Inc.

APPENDIX B

AQ MODELING (SCREEN3) PARAMETERS AND RESULTS

Date: 3/22/2007

SCREEN3 Modeling Raw Data Inputs

Client:

H-K Contractors, Inc.

Source:

Idaho Falls Facility HMA Plant (1968 Barber Green; Drum Mix)

Type:

Dryer Drum

Compound (Air Pollutant): All, set at 1.0 pound per hour (lb/hr)

1. Measured or estimated emission rate in either pounds per hour (lbs/hr) or grams per second (g/s):

1.0 lb/hr or 0.126 g/s

2. Measurements of the exit stack height for the Source, above the ground level in either feet (ft) or meters (m):

28 ft or 8.53 m

3. Measurements of the <u>inside diameter</u> of the stack for the Source in either ft or m:

8.0 ft or 2.44 m

4. Measured or estimated rate of <u>stack exit velocity</u> in either feet per second (ft/s) or meters per second (m/s) of the stack for the Source:

14.92 ft/s or 4.55 m/s

5. Measured or estimated stack gas temperature in either °F or °C of the stack for the Source:

135 °F or 57.22°F or 330.37°K

6. Notification of any terrain in the area that is above the exit of the stack for the Source:

None

7. Notification of the facilities setting as either <u>Urban or Rural</u> of the stack for the Source:

Rural

8. Measurements of the <u>buildings height</u> in either ft or m, if there are any buildings associated with the stack for the Source:

N/A

9. Measurements of the buildings minimum and maximum dimensions in either ft or m:

N/A

10. Location of the facility, and/or nearest city:

1523 East 49th North, Idaho Falls, ID

11. Measurements of distance from the stack for the Source to the property boundary in ft or m:

Unknown

03/30/07 14:30:08

```
*** SCREEN3 MODEL RUN ***

*** VERSION DATED 96043 ***
```

H-K Contractors Idaho Falls Facility HMA Plant Dryer Drum Dispersion Factor

```
SIMPLE TERRAIN INPUTS:
  SOURCE TYPE
                                  POINT
  EMISSION RATE (G/S)
                                .126000
                         200
  STACK HEIGHT (M)
                                8.5300
                        ==
  STK INSIDE DIAM (M)
                                2.4400
                        -
                                 4.5500
  STK EXIT VELOCITY (M/S) =
                             330.7300
  STK GAS EXIT TEMP (K) =
  AMBIENT AIR TEMP (K) =
  RECEPTOR HEIGHT (M)
                        ==
                                1.0000
  URBAN/RURAL OPTION
                                 RURAL
                        500
                                  .0000
  BUILDING HEIGHT (M)
                         200
  MIN HORIZ BLDG DIM (M) =
                                  .0000
  MAX HORIZ BLDG DIM (M) =
                                  .0000
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED. THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 7.576 M**4/S**3; MOM. FLUX = 27.298 M**4/S**2.

*** FULL METEOROLOGY ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	Ulom (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
50.	5.903	4	20.0	20.0	6400.0	7.21	4.35	2.62	NO
100.	16.61	4	20.0	20.0	6400.0	7.21	8.26	4.75	NO
200.	11.20	4	15.0	15.0	4800.0	9.21	15.67	8.70	NO
300.	8.051	4	10.0	10.0	3200.0	13.21	22.78	12.41	NO
400.	6.316	4	8.0	8.0	2560.0	16.22	29.66	15.66	NO
500.	5.072	4	8.0	8.0	2560.0	16.22	36.31	18.63	NO
600.	4.385	4	5.0	5.0	1600.0	25.22	43.08	21.94	NO
700.	3.895	4	5.0	5.0	1600.0	25.22	49.50	24.68	NO
800.	3.466	4	4.5	4.5	1440.0	27.89	55.92	27.49	NO
900.	3.125	4	4.0	4.0	1280.0	31.22	62.28	30.28	NO
1000.	2.839	4	3.5	3.5	1120.0	35.51	68.59	33.07	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 50. M: 102. 16.62 4 20.0 20.0 6400.0 7.21 8.49 4.87 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED

DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED

DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

CALCULATION	MAX CONC	DIST TO	TERRAIN
PROCEDURE	(UG/M**3)	MAX (M)	HT (M)
SIMPLE TERRAIN	16.62	102.	0.